

WHAT IS CLAIMED IS:

1. A cigarette comprising a tobacco rod and a filter element connected to the tobacco rod, said filter element having an end proximal to the tobacco rod and an end distal from the tobacco rod, wherein said filter element comprises:

a first longitudinally extending section of filter material positioned at the end of the filter element proximal to the tobacco rod;

a second longitudinally extending section of filter material positioned at the end of the filter element distal from the tobacco rod and spaced apart from said first section of filter material, the two sections of filter material defining a compartment therebetween;

an adsorbent material in granular form contained within at least a portion of said compartment; and

a plurality of ventilation holes adapted for introducing air into the filter element, said ventilation holes being located at a point along the length of said filter element between the end of the filter element proximal to the tobacco rod and the approximate midpoint of the adsorbent-containing portion of said compartment.

2. The cigarette of Claim 1, wherein said ventilation holes are located between the midpoint of said adsorbent-containing portion of said compartment and the end of said adsorbent-containing portion of said compartment proximal to said first section of filter material.

3. The cigarette of Claim 1, wherein said first section of filter material and said second section of filter material are each independently selected from the group consisting of cellulose acetate tow, gathered cellulose acetate web, polypropylene tow, gathered polypropylene web, gathered polyester web, gathered paper, and strands of reconstituted tobacco.

4. The cigarette of Claim 1, wherein said first section of filter material and said second section of filter material comprise plasticized cellulose acetate tow.

5. The cigarette of Claim 1, wherein said first section of filter material and said second section of filter material have the same particulate removal efficiency.

6. The cigarette of Claim 1, wherein said second section of filter material has a greater particulate removal efficiency than said first section of filter material.

7. The cigarette of Claim 1, wherein said first section of filter material has a greater particulate removal efficiency than said second section of filter material.

8. The cigarette of Claim 7, wherein said first section of filter material and said second section of filter material comprise a fibrous filter material, and said first section of filter material comprises filaments having a lower weight per unit length than the filaments of said second section of filter material.

9. The cigarette of Claim 8, wherein said first section of filter material comprises filaments having a weight per unit length of less than about 2.5 denier per filament and said second section of filter material comprises filaments having a weight per unit length of greater than about 3.0 denier per filament.

10. The cigarette of Claim 9, wherein said first section of filter material comprises filaments having a weight per unit length of about 1.8 to about 2.5 denier per filament and said second section of filter material comprises filaments having a weight per unit length of about 3.0 to about 10 denier per filament.

11. The cigarette of Claim 1, wherein the overall length of the filter element is about 15 to about 65 mm.

12. The cigarette of Claim 11, wherein the overall length of the filter element is about 25 to about 50 mm.

13. The cigarette of Claim 1, wherein the length of each of the first and second
5 sections of filter material is about 5 to about 25 mm.

14. The cigarette of Claim 13, wherein the length of each of the first and second sections of filter material is about 5 to about 15 mm.

10 15. The cigarette of Claim 1, wherein the length of said adsorbent-containing portion of said compartment is about 5 to about 20 mm.

16. The cigarette of Claim 15, wherein the length of said adsorbent-containing portion of said compartment is about 5 to about 10 mm.

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17. The cigarette of Claim 1, wherein said adsorbent is selected from the group consisting of activated carbon, molecular sieves, clays, activated aluminas, silica gels, and mixtures thereof.

20 18. The cigarette of Claim 1, wherein said adsorbent is activated carbon.

19. The cigarette of Claim 18, wherein the activated carbon has an activity of about 60 to about 150 Carbon Tetrachloride Activity.

25 20. The cigarette of Claim 1, wherein said adsorbent has a particle size of about 8x16 mesh to about 30x70 mesh.

21. The cigarette of Claim 1, wherein the number and size of said ventilation holes is sufficient to provide a volumetric air dilution of mainstream smoke of about 10 to about
30 75 percent.

22. The cigarette of Claim 21, wherein the number and size of said ventilation holes is sufficient to provide a volumetric air dilution of mainstream smoke of about 30 to about 40 percent.

5 23. The cigarette of Claim 1, wherein the entire compartment contains adsorbent.

24. A cigarette comprising a tobacco rod and a filter element connected to the tobacco rod, said filter element having an end proximal to the tobacco rod and an end distal from the tobacco rod, wherein said filter element comprises:

10 a first longitudinally extending section of fibrous filter material positioned at the end of the filter element proximal to the tobacco rod;

a second longitudinally extending section of fibrous filter material positioned at the end of the filter element distal from the tobacco rod and spaced apart from said first section of filter material, the two sections of filter material defining a compartment therebetween;

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an adsorbent material in granular form contained within said compartment, said adsorbent material being selected from the group consisting of activated carbon, molecular sieves, clays, activated aluminas, silica gels, and mixtures thereof; and

20 a plurality of ventilation holes adapted for introducing air into the filter element, said ventilation holes being located between the midpoint of said adsorbent-containing compartment and the end of said adsorbent-containing compartment proximal to said first section of filter material,

25 wherein said first section of fibrous filter material comprises filaments having a lower weight per unit length than the filaments of said second section of fibrous filter material.